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ABSTRACT

The effect of verbal contextual information on junior high school students' categorization of differences among photographic art was examined. Photographs of varying levels of abstraction were presented to the viewers both with and without correct and erroneous titles that referred to descriptive or interpretive information. Twelve students enrolled in a summer arts institute for gifted and talented were asked to consider photographs and accompanying titles as if they were analogous to various types of language statements: descriptive, explanatory, interpretive, ethically evaluative, aesthetically evaluative, and theoretical. Results indicated that the abstraction level of photographs and the nature of contextual information does influence viewers' categorizations. Such findings suggest that the processing of photographs is enriched by the availability of informational cues that provide an interpretive framework. The more concrete the cues, the more useful they are. Subsequent research might examine these effects further by manipulating the amount of contextual information beyond the mere presentation of photographs with and without titles. (Author/RM)

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Contextual Information Effects on the Categorization of Differences Among Photographs

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ABSTRACT

This study examined the effect of verbal contextual information on junior high students' categorization of differences among photographic art. Photographs of varying levels of abstraction were presented to viewers with and without correct and erroneous titles that referred to descriptive or interpretive information. Subjects were asked to consider each work of art in relation to its accompanying title and rank order the photograph's correspondence with the following categories outlined by Barrett (1980): (1) descriptions, (2) explanations, (3) interpretations, (4) ethical evaluations, (5) aesthetic evaluations, and (6) theoretical photographs. Results indicated the abstraction level of photographs and the nature of contextual information influenced viewers' categorizations.

Paper presented at the annual meeting of the American Educational Research Association, New Orleans, April 1984.

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In 1966 Lanier recommended that art teachers recognize photographs as significant objects for art appreciation. Chapman (1978) heightened the status of photography within art education when she devoted an entire chapter to photography, film, and television in her influential textbook. Although many art educators regard photographic art as an important visual artform, few have designed programs that educate students' understanding of photography beyond its technical dimensions. Such practice is not unexpected when limited theoretical information is available to guide curriculum development in thinking and talking about the interpretive aspects of photography.

One of the few sources that offers a framework for appreciating the differences among photographs through interpretive thought and talk was developed by Barrett (1980). His structure avoids traditional subject matter categorizations by asking viewers to consider photographs as if they were analogous to various types of language statements: (1) descriptive, (2) explanatory, (3) interpretive, (4) ethically evaluative, (5) aesthetically evaluative, and (6) theoretical. Barrett's categories are designed "to open a directed discussion about photographic meaning in order to increase understanding and appreciation of the variety of

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photographic statements made" (p. 53). The categories are neither discrete nor exclusive. All photographs, for instance, are descriptive, however the function of a photograph, or its "aboutness", may have more to do with an explanation of the world, with an ethical evaluation, with an aesthetic evaluation, or with the artist's personal interpretation of the world. It may otherwise be a photograph about photography and thus function as a theoretical statement.

According to Barrett (1980) descriptive photographs are those that are analogous to statements of fact in language. They are visual recordings of empirical qualities and are interpretively and evaluatively neutral. Descriptive photographs attempt to do no more than render an accurate photographic surface. Examples of descriptive photographs include identification photographs such as drivers' licenses and school ID cards, medical x-rays, and the NASA space exploration photographs.

Explanatory photographs are categorized by Barrett (1980) as those that "attempt objectivity in explaining how things are. They are falsifiable in the sense that they could potentially be empirically demonstrated to be true or false, accurate or inaccurate" (p. 53). Examples of explanatory photographs noted by Barrett include most press photographs, Eadweard Muybridge's animal locomotion studies, Bill Owens', Suburbia and, Our Kind of People, and Bruce Davidson's, East 100th Street.

Interpretive photographs contrast explanatory photographs in Barrett's (1980) framework in that they are nonfalsifiable. In cases of dispute, interpretive photographs cannot be empirically confirmed nor denied as can explanatory statements. Barrett identifies the following cases of

interpretive photographs: Duane Michals', The Spirit of Leaving the Body, and The Creation. Most photographs by Jerry Uelsmann and Minor White exemplify this category.

Barrett (1980) characterizes ethically evaluative photographs as those that imply valuations, moral judgments, or those that generally promote conceptions of how things ought or ought not to be. Examples of ethically evaluative photographs noted by Barrett include W. Eugene Smith's book of photographs entitled, Minamata, that portrays the suffering of village fisherman in Japan as a result of industrial pollution. Photographic advertisements also fall into this category by presenting viewers with what they ought to seek in attaining the "good life". Propaganda photographs are likewise categorized as ethically evaluative by Barrett.

In contrast, Barrett (1980) characterizes aesthetically evaluative photographs as visual notifications of what photographers find intrinsically valuable for appreciation. Emphasis is given to the relationships that appear among the visual elements of a photograph's imagery, and thereby function as visual statements of what the photographer finds ugly or beautiful. Among the many aesthetically evaluative photographs that exist are most works by Edward Weston, Ansel Adams, Aaron Siskind, Harry Callahan, and Joel Meyerowitz.

Theoretical photographs are categorized by Barrett (1980) as those that address the issue of art and photography. They function as visual commentary or as visual art criticism, and can best be described as art about art rather than art about life. Examples of theoretical photographs include Tom Barrow's cancellation series, Duane Michals', Alice's Mirror,

and Les Krims', Making Chicken Soup. The latter is a visual cookbook for making chicken soup and is dedicated to "concerned photographers." Krims' elaborate critical sarcasm is aimed at those who attempt to solve social problems with photographs. In Krims' view their efforts are as useless as is the making of chicken soup to cure physical ailments.

This study was designed to determine whether contextual information affects the differentiation of photographs within the category system outlined above. An earlier study by Koroscik, Desmond, and Brandon (in press) found that the semantic analysis of photographs was subject to the availability of contextual references to descriptive and interpretive characteristics of photographic imagery. Subjects were presented with either descriptive titles that made literal reference to objects, persons, or events depicted in a work (e.g., Revolving Door, and Woman in Purdah), or interpretive titles that characterized expressive qualities and/or other non literal aspects of depicted content (e.g., Escape, and The Heritage of Motherhood). Identical photographs and titles were used in this study to measure the effect of contextual information on junior high school students' categorization of differences among photographs that display low to high levels of abstraction.

Method

Design and Subjects

Three within-subjects variables were factorially combined in the experiment: Title Context (Correct Title, Erroneous Title, No Title), Abstraction Level (Low, Medium, High), and Title Type (Descriptive, Interpretive).

Junior high school students enrolled in the Summer Arts Institute for the Gifted and Talented at Indiana University volunteered to participate in the study. The 12 students who completed the experiment were enrolled in a photography course at the Institute but had limited prior experience in photographic education. Testing was conducted during the second week of instruction after students were introduced to Barrett's category system.

Materials

Twelve photographs displaying varying abstraction levels and representing American photography from 1899 to 1972 were reproduced on 8 x 10 inch photographic paper. Photographs were selected with original artist generated descriptive and interpretive titles. Three photographic judges independently rated 24 photographs on the extent to which they displayed low to high levels of abstraction. Twelve photographs from the 24 judged were selected for use in the experiment, six with descriptive titles and six with interpretive titles. Erroneous titles with misleading references to descriptive and interpretive aspects of the photographs were also generated and unanimously agreed upon by the judges.

Test booklets included three copies of each photograph, one with the original correct title, one with the erroneous title, and one with no title. Presentation order of the 36 photographs were randomized independently for each set of test booklets. Multi-colored question cards were used by subjects to record their responses to test questions. Each card was prepared with a list of answer alternatives and the title of the corresponding photograph.

Dependent Measure

The test included oral and written instructions informing participants that they were to consider each photograph in relation to its title and determine its correspondence with the following categories: (1) descriptive, (2) explanatory, (3) interpretive, (4) ethically evaluative, (5) aesthetically evaluative, and (6) theoretical. Since the category system was designed as an overlapping structure for considering the differences among photographs, subjects were instructed to rank order the three categories that best matched each photograph in relation to its title.

Procedure

Subjects were introduced to the differences among photographs as outlined by Barrett (1980) in an hour long slide-lecture presentation the evening before the experiment. The participants were also engaged in a discussion of how selected slides of photographs matched Barrett's categories immediately following the lecture in order to assess students' comprehension of the presentation. Subjects were again asked to demonstrate their understanding of these concepts in a review session the next morning just prior to the experiment.

Testing began with instruction in the use of the test booklets and the question cards. Subjects were given as much time as they wished to study each photograph in relation to its title and to give their categorization responses. Upon completion of the test, subjects were instructed to translate each of the six categories into their own words thereby indicating their understanding of the categorical differences used in ranking the photographs.

Results and Discussion

Category Errors

Categorizations of the correctly titled, erroneously titled, and nontitled photographs were first analyzed by comparing the junior high school students' rankings to those independently made by four art judges with advanced degrees in the visual arts who had prior knowledge of Barrett's category system. Table 1 lists the judges' category assignments for every photograph categorized by subjects. Unlike the participants of the experiment, judges had the benefit of knowing the correct title of each photograph when making their categorization.

The category error scoring procedure involved the subtraction of five points for every categorization made by subjects that did not match any one of the three given each photograph by the art judges. These error scores were then totaled by title context, by abstraction level, and by title type across all repeated measures. An analysis of variance on category errors indicated statistically significant differences for the following main effects and interactions: Abstraction Level, Title Type, Abstraction Level x Title Type, and Abstraction Level x Title Type x Title Context (see Table 2).

As expected, post hoc comparisons indicated the categorization of highly abstract photographs were most inaccurate, i.e., high abstraction ($\underline{M}$ = 8.54) medium abstraction ($\underline{M}$ = 5.63) = low abstraction ($\underline{M}$ = 6.81), $\underline{p}$ < .01. Subjects apparently found descriptive titles ($\underline{M}$ = 7.50) and interpretive titles ($\underline{M}$ = 6.11) equally beneficial when ranking photographs low in abstraction, yet significant differences were found in error

Table 1
Categorical Rankings of Photographs by Judges

Abstraction Level		Categorical Rankings: First Choice	Second Choice	Third Choice
Low Abstraction				
Descriptive title	(1)	4 4 4 4	3 3 3 3	2 2 U U
	(2)	2 2 2 4	1 2 4 5	1 1 3 5
Interpretive title	(3)	4 4 4 4	2 2 2 2	1 3 3 3
	(4)	3 3 4 4	3 4 4 5	2 3 5 U
Medium Abstraction				
Descriptive title	(5)	3 4 6 6	1 3 5 5	1 1 5 6
	(6)	2 2 2 5	2 4 4 5	1 1 3 U
Interpretive title	(7)	3 3 3 5	3 5 5 5	4 6 U U
	(8)	3 3 3 4	3 4 5 5	2 2 5 U
High Abstraction				
Descriptive title	(9)	1 5 5 5	1 2 3 5	1 6 U U
	(10)	1 1 1 1	2 5 5 5	2 2 2 5
Interpretive title	(11)	3 3 5 5	3 3 5 6	5 6 U U
	(12)	3 3 3 5	3 5 5 6	5 U U U

Note. Categorical rankings for 12 photographs are given for judges one through four with U indicating an undecided choice. Categories were assigned numbered labels as follows:

1. Descriptive photographs
2. Explanatory photographs
3. Interpretive photographs
4. Ethically evaluative photographs
5. Aesthetically evaluative photographs
6. Theoretical photographs

Table 2
Analysis of Variance Summary Table: Category Errors

Source	df	SS	MS	F	p
Abstraction Level	2	309.95	154.98	14.11	.001
Title Type	1	1066.83	1066.83	97.16	.001
Title Context	2	3.01	1.51	.14	NS
Abstraction Level X Title Type	2	1063.70	531.85	48.44	.001
Abstraction Level X Title Context	4	76.85	19.21	1.75	NS
Title Type X Title Context	2	14.42	7.21	.66	NS
Abstraction Level X Title Type X Title Context	4	889.05	222.26	20.24	.001
Pooled Error	187	2052.86	10.98		

Table 3
Analysis of Variance Summary Table: Categorical Rankings

Source	df	SS	MS	F	p
Abstraction Level	2	11.59	5.80	1.74	NS
Title Type	1	19.56	19.56	5.89	.05
Title Context	2	9.17	4.59	1.38	NS
Abstraction Level X Title Type	2	9.60	4.80	1.44	NS
Abstraction Level X Title Context	4	41.31	10.33	3.11	.05
Title Type X Title Context	2	4.74	2.37	.71	NS
Abstraction Level X Title Type X Title Context	4	11.05	2.76	.83	NS
Pooled Error	187	621.48	3.32		

performance when interpretive titles accompanied photographs displaying medium abstraction [interpretive (M = 8.33) > descriptive (M = 2.92), p < .01] and high abstraction levels [interpretive (M = 13.19) > descriptive (M = 3.88), p < .01].

Further analysis of the Abstraction Level x Title Type x Title Context interaction indicated interpretive titles contributed to the largest number of category errors for highly abstract photographs in the correct title condition [interpretive (M = 12.50) > descriptive (M = 4.58), p < .01]. Post hoc comparison of interpretive title context errors showed: erroneous titles (M = 9.16) = correct titles (M = 7.50) > no titles (M = 3.33), p < .01, for medium abstraction photographs, and similarly that erroneous titles (M = 13.75) = correct titles (M = 12.50) > no titles (M = 4.16), p < .01, for highly abstract photographs. No significant differences were found for title contexts when low abstraction photographs were ranked. Viewers evidently had difficulty discerning the reliability of titles when they referenced nonliteral dimensions of ambiguous images. Subjects used correct descriptive information to their advantage but failed in detecting the inaccuracy of erroneous contexts.

Category Rankings

Subjects' rank orderings were also analyzed in relation to the category that best represented each photograph as ranked by the four art judges. Three points were assigned to rankings that matched the judges' categorizations as a first selection, two points were assigned to second choice matches, one point was given to third choice matches, while no points were awarded when matches were not indicated.

An analysis of variance on these ranking scores showed significant differences for Title Type and for Abstraction Level x Title Context (see Table 3). Title type effects were found to match those in the prior analysis of category errors, i.e., descriptive titles ($\underline{M}$ = 3.25) guided subjects in making category assignments that matched the judges' rankings with significantly greater frequency than interpretive titles ($\underline{M}$ = 2.65). Findings deviated from error performance for low and medium abstraction photographs in which case no significant differences were observed for title context. Correct titles ($\underline{M}$ = 2.96) and erroneous titles ($\underline{M}$ = 2.29) did, however, match previous findings in misleading subjects' categorization of highly abstract photographs, $\underline{p} < .01$. The presence of contextual information apparently confused viewers when they failed to distinguish erroneous information from correct reference cues. This ambiguity was overcome when title contexts were absent for high abstraction photographs in the no title condition ($\underline{M}$ = 3.96). Subjects, nevertheless, had greatest difficulty categorizing the differences among untitled photographs when they displayed high levels of abstraction, i.e., low abstraction ($\underline{M}$ = 2.63) = medium abstraction ($\underline{M}$ = 2.88) < high abstraction ($\underline{M}$ = 3.96), $\underline{p} < .05$. These abstraction level effects were not matched in either the correct title nor erroneous title contexts.

Conclusions

Results indicated viewers were indeed influenced by the nature of contextual information that accompanied photographs of varying levels of abstraction throughout presentation. Such findings support those observed by Koroscik, Desmond, and Brandon (in press) and suggest interpretive

processing of photographs was enriched by the availability of informational cues that provided an interpretive framework. The concreteness of such cues were found to influence their usefulness. Subsequent research might examine these effects further by manipulating the amount of contextual information beyond merely the presentation of photographs with and without titles. Future investigations might additionally study the differences in viewing responses for persons with varied levels of training in photography and the visual arts. Such research might outline important agenda for curriculae designed with the goal of promoting the appreciation of photographic art.

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